DEPARTMENT OF THE AIR FORCE
158TH FIGHTER WING (ACC)
SOUTH BURLINGTON VERMONT

18 April 2014

MEMORANDUM FOR INTERESTED INDIVIDUALS, ORGANIZATIONS, PUBLIC GROUPS, AND GOVERNMENT AGENCIES

FROM: 158FW/CC

SUBJECT: F-35A Operational Basing Environmental Impact Statement Mitigation and Management Plan

1. As referenced in the Record of Decision (ROD) selecting the Burlington Air Guard Station (AGS) as the first Air National Guard F-35A operational base, Council on Environmental Quality (CEQ) implementing regulations require the development of a Mitigation and Management Plan (MMP). The stated mitigations in the Final Environmental Impact Statement (EIS) and the management actions in the ROD will be monitored through the basing and operational phases of this action. Mitigations follow the CEQ implementing regulations for the National Environmental Policy Act (NEPA) 40 CFR 1505.3 and §1508.20. The MMP ensures identification of principal and subordinate organizations having responsibility for the oversight and execution of the specific mitigation and management actions.

2. As referenced in the ROD, the relative immaturity of the F-35A program may give rise to new data and information. This information will be used appropriately to improve operational mitigation measures and will result in a continuous cycle over time seeking improvements. Accordingly, an adaptive management approach can lead to modifications to this MMP.

3. The communities affected by the F-35A need to know what commitments are being considered and selected, as well as the results of implemented mitigation measures. The MMP frames the way forward and defines who will be responsible for implementing, funding, and monitoring the mitigation measures. The Federal Aviation Administration (FAA) was a cooperating agency during the EIS process and the Vermont Air National Guard (VTANG) will continue to partner with the FAA in carrying out mitigation measures. The VTANG will report the status of the MMP through the National Guard Bureau to US Air Force Headquarters when requested.

4. The point of contact for this MMP is the Vermont National Guard Public Affairs Office, ATTN: Major Christopher Gookin, 789 Vermont National Guard Road, Colchester, VT 05446 (802) 338-3324.

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Commander

F-35A Operational Basing
Environmental Impact Statement
Mitigation And Management Plan

Vermont Air National Guard
158th Fighter Wing
Burlington Air Guard Station

18 April 2014

Acronyms and Abbreviations

134 FS	134th Fighter Squadron
158 CES	158th Civil Engineering Squadron
158 FW	158th Fighter Wing
158 FW/EM	158th Fighter Wing/Environmental Management Office
158 FW/F-35PIO	158th Fighter Wing/F-35 Program Integration Office
158 FW/PA	158th Fighter Wing Public Affairs Office
158 FW/SE	158th Fighter Wing Safety Office
158 OG	158th Operations Group
158 OGV	158th Operations Group Chief of Standardization and Evaluation
A3	Training and Operations
ACC/A3	Air Combat Command Training and Operations
AMP	Adaptive Management Program
AFI	Air Force Instruction
AGS	Air Guard Station
AICUZ	Air Installation Compatible Use Zone
BASH	Bird/Wildlife Aircraft Strike Hazard
BIAP	Burlington International Airport
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CFT	Cross Functional Team
EIS	Environmental Impact Statement
EMS	Environmental Management System
ESOHC-ISC	Environment, Safety and Occupational Health Council-Installation Safety Council
FAA	Federal Aviation Administration
FEIS	Final Environmental Impact Statement
FOC	Full Operational Capability
FWI	Fighter Wing Instruction
HQ	Headquarters
MILCON	Military Construction
MMP	Management and Mitigation Plan
MP	Mitigation Plan
NCP	Noise Compatibility Program
NGB	National Guard Bureau
O&M	Operations and Maintenance
PAA	Primary Aircraft Assigned
ROD	Record of Decision
SWPPP	Storm Water Pollution Prevention Plan
TFE	Total Force Enterprise
USAF	United States Air Force
USFWS	United States Fish and Wildlife Service
VTANG	Vermont Air National Guard
VT DEC	Vermont Department of Environmental Conservation
VT SHPO	Vermont State Historic Preservation Office

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F-35A OPERATIONAL BASING

MITIGATION AND MANAGEMENT PLAN

On 2 December, 2013, the United States Air Force (Air Force) issued a Record of Decision (ROD) for the F-35A Operational Basing Final Environmental Impact Statement, September 2013 (FEIS) (Federal Register, Vol.78, No.193, EIS No.20130295, pg. 61845, October 4, 2013). The ROD documents the Air Force's decision to beddown 18 F-35A primary aircraft assigned (PAA) at the Burlington, Vermont Air Guard Station (AGS). The Air Force is mandated by Title 32 of the Code of Federal Regulations Part 989 (32 CFR 989) to prepare a Mitigation Plan (MP) for each ROD that contains mitigation measures. The 2 December 2013 ROD contains mitigation measures and management actions, which are also referenced in the FEIS. Since these mitigation measures and management actions have the effect of reducing potential environmental consequences, it is necessary and appropriate to ensure these actions are implemented as part of the basing of the F-35A at the Burlington AGS. This plan will be referred to herein as the Mitigation and Management Plan (MMP).

The objective of this MMP is to ensure that actions to avoid or mitigate potentially significant environmental impacts are implemented during construction and operation of the project. In accordance with the requirements of 32 CFR 989.22(d), this MMP was prepared to ensure that mitigation measures and management actions identified in the FEIS and the ROD for this action are implemented in an effective and timely manner and that identified impacts are avoided or mitigated. This MMP identifies organizations responsible for funding and implementing the mitigation measure/management action, and a completion date is identified for each.

The ROD acknowledges that, given the relative immaturity of the F-35 program, identification of new data and information relative to the F-35A may arise and it is possible that the impacts identified in the FEIS (Table 2-12) and the effectiveness of prescribed management and mitigation measures may be different from those expected. Consequently, new information may become available, or the effectiveness of mitigation measures may be different than expected. To accommodate for this, the ROD requires that this MMP incorporate an adaptive management program in accordance with the President's Council on Environmental Quality (CEQ) mitigation and monitoring guidance, and other legal and generally accepted practices. Section IV of this MMP describes the adaptive management program to be implemented for this action.

I. RESPONSIBLE PARTIES

The Air Force, as the lead agency, has overall responsibility for ensuring that commitments outlined in the ROD and this MMP are carried out. In practice, the majority of management actions and mitigation measures will be developed and implemented at the base level, with support as required by the Air Force and the National Guard Bureau (NGB). The 158th Fighter Wing (158 FW) of the Vermont Air National Guard (VTANG) operates at the Burlington AGS, and the 134th Fighter Squadron (134 FS) is the only operational flying squadron on base. The 158 FW incorporates a mature and highly successful active duty association as part of the Air Force's Total Force Enterprise (TFE).

Responsible parties for each mitigation measure and management action are identified in Table 1 of this document. The 158 FW F-35 Program Integration Office (F-35PIO), Operations Group (OG), Civil Engineering Squadron (CES) and Environmental Management (EM) office are the key organizations responsible for implementation of specific actions. The 158 FW leadership will direct, assign accountability for and track the results of mitigation measures and management actions through the base Environment, Safety and Occupational Health Council-Installation Safety Council (ESOHC-ISC) and by incorporation of these activities into the Environmental Management System (EMS) maintained at the base.

II. MITIGATION REQUIREMENTS

The Air Force will beddown one PAA squadron of 18 F-35As under the 2 December 2013 ROD at Burlington AGS. The AGS is collocated with the Burlington International Airport (BIAP), a civilian airport that operates primarily under Federal Aviation Administration (FAA) rules and regulations. The most significant environmental impacts associated with basing F-35A aircraft at Burlington AGS are anticipated to be related to noise generated during operation of the aircraft. Current mitigation measures and management actions in place for F-16 operations will continue as F-35A operations begin, and additional mitigation measures will be assessed and implemented before and after arrival of the new aircraft. This will necessarily be an evolving process, as the local operating procedures for the F-35A and noise abatement procedures that may be implemented will not be fully developed until the aircraft begins to be flown at the Burlington AGS, which is anticipated to be in the year 2020. Table 1 of this MMP lists the specific mitigation measures and management actions related to noise abatement that are currently employed, and outlines procedures and time frames for evaluation of additional mitigation measures that will be assessed upon arrival of the aircraft at the Burlington AGS. Additional operational changes that may mitigate noise impacts will be evaluated for effectiveness and reviewed to assure they do not result in negative training or safety implications. Management actions for potential environmental impacts not related to noise are also listed in Table 1.

Construction associated with beddown of a total of 18 F-35A aircraft primarily consists of renovations and upgrades to existing facilities and installation of new utilities on previously developed land at the Burlington AGS. Construction is needed to upgrade existing utility infrastructure, aircraft hangars, maintenance shops, simulator facilities and associated work areas. Construction will occur primarily within the highly developed and previously disturbed flight line area and adjacent buildings. F-35A aircraft operations at Burlington AGS will use existing airspace units and ranges in a manner consistent with current F-16 operations.

Pages 5 through 7 of the ROD list management actions to avoid or reduce potential environmental impacts, and each is addressed in Table 1 of this MMP.

III. METHOD FOR ACCOMPLISHING MANAGEMENT ACTIONS

Noise related mitigation measures fall into two general categories at Burlington AGS: 1) operational measures directly implemented and maintained by the 158 FW (also referred to as "local noise abatement procedures") and 2) noise mitigation measures that are developed and implemented under the Burlington IAP's Noise Compatibility Program (NCP) required by 14 CFR Part 150, and administered by the Federal Aviation Administration (FAA).

Local noise abatement procedures are codified in Fighter Wing Instructions (FWIs) and other base level standard operating procedure documents such as the local In-Flight Guide. 158 FW aircraft operations are closely tracked, counted and analyzed and are continually assessed for compliance with established procedures. Local noise abatement procedures can be modified and adapted to some extent as new information is received, including input from the local community. Changes to preferred runway operations, modified ground track departure procedures, and adjusting of pattern operations and altitudes are examples of operational elements that can be reviewed and potentially modified by 158 OG personnel to mitigate noise impacts on surrounding communities. Flight, ground and weapons safety are always considered when assessing potential changes to mitigate noise, and safety cannot be compromised to mitigate noise.

The 158 FW participates in the Burlington IAP's noise mapping, NCP updates and 14 CFR Part 150 compliance process. In some cases, as referenced in the ROD, voluntary mitigation measures undertaken by military organizations at Burlington AGS are referenced within the NCP update and FAA's resulting Part 150 Record of Approval memorandum. The 158 FW will continue to participate in the Burlington IAP Part 150 process to the maximum extent required to effectively coordinate, implement and continually assess noise mitigation measures and management actions. It is noted that the 158 FW, NGB and Air Force cannot control the timing or final content of the NCP and Part 150 process, as FAA has jurisdiction over the process.

Non-noise related impacts are also addressed in Table 1, and can be effectively managed using existing 158 FW environmental management, safety and occupational health procedures, and continued compliance with applicable federal and State of Vermont regulations, Air Force Instructions, and Executive Orders.

An adaptive management program as described in the CEQ Memorandum titled, "Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact" dated 14 January 2011, will be incorporated into this MMP, and is described in the next section.

IV. ADAPTIVE MANAGEMENT PROGRAM (AMP)

The ROD acknowledges that, given the relative immaturity of the F-35 program, identification of new data and information relative to the F-35A may arise and it is possible that the impacts identified in the FEIS (Table 2-12) and the effectiveness of prescribed management and mitigation measures may be different from those expected. Consequently, new information may become available, or the effectiveness of mitigation measures may be different than expected. Adaptive management techniques

will be utilized to identify additional management action refinement, and will be compared to information provided in the FEIS.

The 14 January 2011 CEQ memorandum referenced above provides guidance to assist agencies in assuring that mitigation commitments are being performed as described in the FEIS and ROD, and advises that an adaptive management program can provide a mechanism to adjust and refine mitigation measures if needed to achieve projected environmental outcomes. The CEQ memo states on page 11, "For mitigation commitments that warrant rigorous oversight, an Environmental Management System (EMS), or other data management system could serve as a useful way to integrate monitoring efforts effectively. Other possible monitoring methods include agency-specific environmental monitoring, compliance assessment, and auditing systems."

The 158 FW maintains an active EMS that follows the International Organization for Standardization (ISO) 14001 EMS model to monitor and continually improve the Wing's environmental performance. ISO 14001 is an industry standard management program that provides practical tools for organizations looking to identify and control their environmental impact and constantly improve their environmental performance. The 158 FW EMS targets specific significant environmental aspects of its operations, and annually runs through a cycle of an internal audit by the 158 FW EMS Cross Functional Team (CFT) and a subsequent Management Review by the 158 FW Environment, Safety and Occupational Health Council-Installation Safety Council (ESOHC-ISC). The base ESOHC-ISC consists of all base commanders and other key decision makers and supervisors, and action items that result from annual audits and management reviews are assigned to a responsible party and results tracked at semi-annual meetings. Incorporating this F-35 MMP into the 158 FW EMS will assure that the mitigation measures and management actions listed in Table 1 are implemented, tracked, assessed, and modified or expanded as necessary to meet the intent of minimizing the environmental impacts of the basing action.

As stated above, the 158 FW will continue to participate in the Burlington IAP's noise mapping, NCP updates and 14 CFR Part 150 compliance process. This process is typically repeated on a 5 to 10 year cycle, and is itself an adaptive process. Noise modeling and mapping done during the Part 150 process will provide the data on which future noise mitigation and management actions will be proposed by Burlington IAP and ultimately approved by FAA as part of an updated NCP. There are well-defined public involvement requirements during the development and implementation of the NCP, and the 158 FW will participate in this public process to the extent requested by the Burlington IAP Manager.

The F-35A aircraft is currently flying under a restricted flight envelope at an early stage of overall life-cycle development. As the Air Force gains more experience flying the F-35A prior to basing the aircraft at Burlington AGS, operational parameters such as airspeed and power setting requirements will be refined. Changes in these parameters will be compared to those used in the FEIS, and the AF and NGB will evaluate how these changes would affect the noise contours calculated for Burlington AGS. Changes in operational parameters developed by the AF in advance of basing the aircraft in Burlington will inform the 158 FW/F-35PIO as to potential local operational mitigation measures that may be evaluated. Performance and other characteristics may also change as the aircraft is adapted to flying conditions at Burlington AGS. Additional noise modeling will be conducted by NGB after local operations mature,

and the resulting noise contours and related impacts will be compared to those in the FEIS. Refer to Table 1, item numbers 5 and 6 for more specific mitigation and management actions.

Any changes in the construction schedule would have an effect on completion of the actions for those specific projects (Table 1).

V. APPLICABLE DOCUMENTS

The following documents are incorporated by reference and shall be integrated into project design and planning as appropriate:

- F-35A Operational Basing Final Environmental Impact Statement dated September 2013
- Record of Decision, Environmental Impact Statement dated 2 December 2013
- CEQ Memo *Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact* dated 14 January 2011.
- Burlington International Airport 14 CFR 150 Update; Noise Compatibility Program Update dated April 2008
- Federal Aviation Administration Memorandum with subject, "Burlington International Airport, Part 150 Record of Approval" dated 19 June 2008

VI. SCHEDULE FOR EXECUTION OF ACTIONS

The following Mitigation and Management Actions Table describes the method for executing actions, organization responsible for implementing the measure, funding responsibility, and the estimated completion date for each measure. Any changes in the construction schedule would have a similar effect on completion of the actions for those specific projects.

Table 1. Burlington AGS F-35A Operational Basing FEIS –Mitigation and Management Actions

Number	Management Actions to Reduce the Potential for Environmental Impacts (See 2 Dec 2013 ROD, pages 5-7 and FEIS Sections 2.6 and BR2.8)	Method for Execution / Monitoring (Monitoring of all items will be done by 158 FW ESOHC-ISC by incorporating into 158 FW EMS)	Entity Responsible for Implementation of Mitigation	Funding Responsibility	Completion Date
General					
1	Continue to undertake voluntary restrictions prescribed in the Aircraft Operations Measures (Nos. 5, 6, and 7) outlined in the Burlington International Airport Part 150 Record of Approval dated June 2008.	Maintain existing agreements and dialogue with Burlington IAP.	158 OG	N/A; no additional funding required	Ongoing practice, may change once Part 150 and NCP is updated
2	Work with the Vermont State Historic Preservation Office to ensure no adverse effects to listed historic properties and districts in the vicinity of Burlington International Airport.	Consult with Vermont Division of Historic Preservation upon commencement of F-35 operations at Burlington AGS to establish method of execution and monitoring. Assess after one year of FOC for potential adverse effects.	158 FW/EM	N/A; no additional funding required	One year after FOC, annual review upon SHPO request
Airspace Management and Use					
3	Continue close coordination with the FAA Air Route Traffic Control Centers (ARTCC), Air Traffic Control (ATC), and other FAA entities to minimize conflicts with civil and commercial aviation.	Maintain existing agreements and continuous open dialogue with FAA representatives to minimize conflicts.	158 OG	N/A; no additional funding required	Ongoing practice, no end date
4	Avoid airports and airfields underlying military airspace using standard procedures.	Maintain existing dialogue with airport and airfield managers in the region to identify and resolve any emerging conflicts.	158 OG	N/A; no additional funding required	Ongoing practice, no end date
Noise					
5	Follow-on noise study at Burlington AGS to validate the operational data in order to re-evaluate projected noise levels.	Noise contours from the FEIS will be verified through BIAP's ongoing NCP as required through the CFR Part 150 process. NGB will program funding for FY2021 in anticipation of FOC being achieved at that time.	NGB and 158 FW (in conjunction w/ BIAP)	NGB	Initiate effort once 18 F-35A PAA at Burlington AGS

Number	Management Actions to Reduce the Potential for Environmental Impacts (See 2 Dec 2013 ROD, pages 5-7 and FEIS Sections 2.6 and BR2.8)	Method for Execution / Monitoring (Monitoring of all items will be done by 158 FW ESOHC-ISC by incorporating into 158 FW EMS)	Entity Responsible for Implementation of Mitigation	Funding Responsibility	Completion Date
6	Adhere to all existing FAA and local avoidance procedures, flight restrictions, scheduling adjustments, and other practices designed to reduce aircraft noise and overflights.	Current (F-16) operational noise mitigation measures such as modified ground track departure procedures, adjusted pattern operations and altitudes, adjusted power setting profiles during take offs, and hours of operation will continue to be implemented with the F-35A. Any future changes to current measures and potential new mitigation measures will be reviewed to assure training and safety requirements are not compromised and will be incorporated into the noise modeling process to gauge the effectiveness of the measures on reducing noise impacts (see Number 5 above). The number of flight operations will be tracked by the 158 OG and verified by BIAP FAA Air Traffic Controllers. These counts will be compared to the assumptions made in the FEIS for the noise and air quality modeling to verify that F-35A flight operations are within the parameters identified in the FEIS. Continue ongoing monitoring of deviation reports and noise complaints and communicating occurrences with appropriate offices.	158 OG 158 FW Public Affairs Office (PA)	N/A; no additional funding required	Ongoing practice, no end date
7	Utilize advance simulators for training to the extent practicable.	The F-35A training syllabus is under development (ACC/A3) and in accordance with Air Force policy will use flight simulators when practicable.	ACC/A3 158 OG	N/A; no additional funding required	Ongoing practice, no end date

Number	Management Actions to Reduce the Potential for Environmental Impacts (See 2 Dec 2013 ROD, pages 5-7 and FEIS Sections 2.6 and BR2.8)	Method for Execution / Monitoring (Monitoring of all items will be done by 158 FW ESOHC-ISC by incorporating into 158 FW EMS)	Entity Responsible for Implementation of Mitigation	Funding Responsibility	Completion Date
8	Avoid, to the extent practicable: - Identified seasonally sensitive American Indian ceremonies or other seasonal activities; - Low-altitude (below 5,000 feet AGL) overflights of identified seasonally sensitive ranching and recreation activities; and - Low-altitude overflights (below 5,000 feet AGL) on holidays.	Continue open dialogue between 158 FW, airspace managers and Tribal Governments to assure that awareness of avoidance areas and times are kept current.	158 FW 158 OG 158 FW/EM	N/A; no additional funding required	Ongoing practice, no end date.
Air Quality					
9	Employ fugitive dust control and soil retention practices, including: - Use of water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the construction area; - Use of temporary wind fencing around sites being graded or cleared; - Suspension of all soil disturbance activities when winds exceed 25 miles per hour or when visible dust plumes emanate from the site; - Covering truck loads that haul dirt, sand or gravel; - Designating personnel to monitor the dust control program and order increased watering, as necessary, to prevent the transport of dust off site.	Construction contracts include these requirements as conditions of the contract. Perform periodic inspections of construction activities and shut down activity in non-compliance within two hours of notification if the non-compliance has not been corrected. Utilize Base Command Post notification system to identify wind conditions. Soil disturbance activities can resume when winds are less than 25 mph for 1 hour.	158 CES 158 FW/EM	Dust control requirements are specified in construction contracts. No additional funding required.	Continuous from start through completion of construction

Number	Management Actions to Reduce the Potential for Environmental Impacts (See 2 Dec 2013 ROD, pages 5-7 and FEIS Sections 2.6 and BR2.8)	Method for Execution / Monitoring (Monitoring of all items will be done by 158 FW ESOHC-ISC by incorporating into 158 FW EMS)	Entity Responsible for Implementation of Mitigation	Funding Responsibility	Completion Date
10	Employ, where feasible, construction equipment emission control measures, including: - Maintain equipment according to manufacturer specifications. - Restrict idling of equipment and trucks to a maximum of five minutes at any location. - Employ diesel oxidation catalysts and/or catalyzed diesel particulate traps. - Use electricity from power poles rather than temporary diesel- or gasoline-powered generators. - Provide temporary traffic control, such as a flag person, during all phases of construction to maintain smooth traffic flow. - Keep construction equipment and equipment staging areas away from sensitive receptor areas (such as day care centers). - Re-route construction trucks away from congested streets or sensitive receptor areas. - Use construction equipment with engines that meet USEPA Tier 3 and 4 nonroad standards. - Use alternatively-fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric. - Minimize traffic speeds on all unpaved roads.	When applicable, construction contracts include these requirements as conditions of the contract. Perform periodic inspections of construction activities and shut down activity in non-compliance within two hours of notification if the non-compliance has not been corrected.	158 CES 158 FW/EM	These requirements are specified in construction contracts as applicable. No additional funding required.	Continuous from start through completion of construction
Safety					
11	Working with the F-35 Joint Program Office and the ANG, develop F-35A and location-specific emergency fuel dumping procedures.	Air Force Instruction 11-2F-35Av3 Paragraph 7.14 details the specific procedures for F-35A fuel dumping. Local site-specific procedures will be developed and published in a local supplement to the AFI.	158 OG	N/A; no additional funding required	First Aircraft Arrival
12	Share information with local fire departments on F-35A crash response procedures.	Incorporate F-35A crash response procedures into on-going cross training between 158 FW Fire Department and other local fire departments. Update mutual aid agreements to reflect F-35 specific information.	158 CES	N/A; no additional funding required	First Aircraft Arrival

Number	Management Actions to Reduce the Potential for Environmental Impacts (See 2 Dec 2013 ROD, pages 5-7 and FEIS Sections 2.6 and BR2.8)	Method for Execution / Monitoring (Monitoring of all items will be done by 158 FW ESOHC-ISC by incorporating into 158 FW EMS)	Entity Responsible for Implementation of Mitigation	Funding Responsibility	Completion Date
Soils and Water					
13	Sequence construction activities to limit soil exposure so it will not last for long periods.	Construction contract documents include provisions to minimize construction related stormwater pollution. If project involves over 1 acre, an EPA Construction General Permit for stormwater discharge is required as well. Perform periodic inspections of construction activities and shut down activity in non-compliance within two hours of notification.	158 CES 158 FW/EM	Storm water permit requirements are specified in construction contracts. No additional funding required. Ongoing stormwater permit fees are funded by NGB.	Continuous from initial design of project through completion of construction
14	Manage onsite storm water and prevent discharges into nearby surface waters through site planning with low impact design principles and engineered storm water retention ponds (or swales).	Construction and renovation of facilities will be designed to manage storm water in accordance with low impact design principles whenever practicable. Projects over certain thresholds require a State of Vermont stormwater system operation permit. Perform periodic inspection of construction activities to verify compliance with site-specific designs.	158 CES 158 FW/EM	Storm water permit requirements are specified in construction contracts. No additional funding required. Ongoing stormwater permit fees are funded by NGB.	Continuous from design through completion of construction and thereafter if stormwater operation permit is required.
15	Treat disturbed areas (after clearing, grading, earth moving, or excavation is completed) by watering, re-vegetation, or by spreading non-toxic soil binders until they are paved or otherwise developed to prevent dust generation.	Construction contract documents include provisions to minimize construction related stormwater pollution. If project involves over 1 acre, an EPA Construction General Permit for stormwater discharge is required as well. Perform periodic inspections of construction activities and shut down activity in non-compliance within two hours of notification.	158 CES 158 FW/EM	Storm water permit requirements are specified in construction contracts. No additional funding required. Ongoing stormwater permit fees are funded by NGB.	Continuous from initial design of project through completion of construction

Number	Management Actions to Reduce the Potential for Environmental Impacts (See 2 Dec 2013 ROD, pages 5-7 and FEIS Sections 2.6 and BR2.8)	Method for Execution / Monitoring (Monitoring of all items will be done by 158 FW ESOHC-ISC by incorporating into 158 FW EMS)	Entity Responsible for Implementation of Mitigation	Funding Responsibility	Completion Date
16	Update installation Storm Water Pollution Prevention Plans (SWPPP) as needed.	If project involves over 1 acre, an EPA Construction General Permit for stormwater discharge is required and a project-specific SWPPP is required. Review the base-wide Storm Water Pollution Prevention Plan (SWPPP) and update as necessary to reflect post-construction conditions and mission activities.	158 CES 158 FW/EM	Storm water permit requirements are specified in construction contracts. No additional funding required. Ongoing stormwater permit fees are funded by NGB.	Continuous from design through completion of construction. Base wide SWPPP is updated annually
17	Store chemicals, cements, solvents, paints, or other potential water pollutants in locations where they cannot cause runoff pollution.	Continue use of standard procedures as outlined in the base wide SWPPP and as required by the current EPA Multi Sector General Permit. The SWPPP is updated annually and the permit requires periodic inspections and training for base personnel.	158 FW/EM	Storm water permit requirements are specified in construction contracts. No additional funding required. Ongoing stormwater permit fees are funded by NGB.	On-going practice, no end date
18	Install gravel pads at access points for construction area to prevent tracking of soil onto paved roads.	Construction contract documents include provisions to minimize construction related stormwater pollution. If project involves over 1 acre, an EPA Construction General Permit for stormwater discharge is required as well. Perform periodic inspections of construction activities and shut down activity in non-compliance within two hours of notification.	158 CES 158 FW/EM	Storm water permit requirements are specified in construction contracts. No additional funding required. Ongoing stormwater permit fees are funded by NGB.	Continuous from initial design of project through completion of construction
Wildlife, Vegetation and Wetlands					
19	Continue adherence to Bird/Wildlife Aircraft Strike Hazard (BASH) program.	Maintain existing BASH program and adapt to F-35A as required.	158 FW/SE	NGB supports BASH program updates as needed	On-going practice, no end date

Number	Management Actions to Reduce the Potential for Environmental Impacts (See 2 Dec 2013 ROD, pages 5-7 and FEIS Sections 2.6 and BR2.8)	Method for Execution / Monitoring (Monitoring of all items will be done by 158 FW ESOHC-ISC by incorporating into 158 FW EMS)	Entity Responsible for Implementation of Mitigation	Funding Responsibility	Completion Date
20	Avoid spreading invasive nonnative species; preclude vehicles from driving in areas with known invasive nonnative species problems.	Construction activities will only occur in previously developed areas with no known infestations of non-native invasive species. If additional construction is proposed, proper invasive species control measures will be specified in construction contract documents.	158 CES 158 FW/EM	These requirements are specified in construction contracts as applicable. No additional funding required.	Continuous from initial design of project through completion of construction
21	Perform any repairs, maintenance, and use of construction equipment (i.e., cement mixers) in designated "staging areas" designed to contain any chemicals, solvents, or toxins from entering surface waters.	Construction contract documents include provisions to minimize construction related pollution. If project involves over 1 acre, an EPA Construction General Permit for stormwater discharge is required as well, which has specific provisions for equipment repair and maintenance. Perform periodic inspections of construction activities and shut down activity in non-compliance within two hours of notification.	158 CES 158 FW/EM	These requirements are specified in construction contracts as applicable. No additional funding required.	Continuous from initial design of project through completion of construction
22	Incorporate into the design and construction of paved surface areas a slope sufficient enough to direct potential runoff away from wetland areas.	Construction and renovation of facilities will be designed to manage storm water in accordance with low impact development principles whenever practicable. Projects over certain thresholds require a State of Vermont stormwater system operation permit. Perform periodic inspection of construction activities to verify compliance with site-specific designs.	158 CES 158 FW/EM	These requirements are specified in construction contracts as applicable. No additional funding required.	Continuous from initial design of project through completion of construction
Cultural Resources					
23	Continue to avoid identified seasonally sensitive American Indian ceremonies or other seasonal activities.	Continue open dialogue between 158 FW, airspace managers and Tribal Governments.	158 FW 158OG 158 FW/EM	N/A; no additional funding required	Ongoing practice, no end date
Land Use and Recreation					
24 (same as 5)	Follow-on noise study at Burlington AGS to validate the operational data in order to re-evaluate projected noise levels.	Noise contours from the FEIS will be verified through BIAP's ongoing NCP as required through the CFR Part 150 process. NGB will program funding for FY2021 in anticipation of FOC being achieved at that time.	NGB and 158 FW (in conjunction w/ BIAP)	NGB	Initiate effort once 18 F-35A PAA at Burlington AGS.

Number	Management Actions to Reduce the Potential for Environmental Impacts (See 2 Dec 2013 ROD, pages 5-7 and FEIS Sections 2.6 and BR2.8)	Method for Execution / Monitoring (Monitoring of all items will be done by 158 FW ESOHC-ISC by incorporating into 158 FW EMS)	Entity Responsible for Implementation of Mitigation	Funding Responsibility	Completion Date
25 (same as 8)	Avoid, to the extent practicable: - identified seasonally sensitive American Indian ceremonies or other seasonal activities; - low-altitude (below 5,000 feet AGL) overflights of identified seasonally sensitive ranching and recreation activities; and - low-altitude overflights (below 5,000 feet AGL) on holidays.	Continue open dialogue between 158 FW, airspace managers and Tribal Governments to assure that awareness of avoidance areas and times are kept current.	158 FW 158 OG 158 FW/EM	N/A; no additional funding required	Ongoing practice, no end date.
Community Facilities and Public Services					
26	Continue and enhance recycling and reuse programs to accommodate waste generated by construction and operational activities	Continue the ongoing practice of quarterly monitoring and reporting of waste diversion and construction debris metrics.	158 FW/EM	N/A; no additional funding required	Ongoing practice, no end date
27	Incorporate Leadership in Energy and Environmental Design (LEED) and sustainable development concepts into construction projects to achieve optimum resource efficiency, sustainability, and energy conservation.	Design contracts will instruct architect of facility upgrades associated with the F-35A beddown to incorporate LEED and sustainable development concepts whenever practicable. Perform periodic inspection of construction activities to ensure compliance with design requirements.	158 CES	N/A; no additional funding required	Continuous from start of design process through completion of construction
Hazardous Materials and Wastes					
28	Follow established procedures for handling hazardous materials and disposing of hazardous wastes.	The Hazardous Materials Management Process (HMMP) at 158 FW can accommodate new chemicals and incorporates review of any new materials by the base Safety, Bio-Environmental, Occupational Health, and Environmental Management offices, as well as the base Fire Department. This function falls under the purview of the base HMMP Team, which meets with the EMS CFT on a quarterly basis.	158 FW/EM CFT-HMMP Team	N/A; no additional funding required	Ongoing practice, no end date

Number	Management Actions to Reduce the Potential for Environmental Impacts (See 2 Dec 2013 ROD, pages 5-7 and FEIS Sections 2.6 and BR2.8)	Method for Execution / Monitoring (Monitoring of all items will be done by 158 FW ESOHC-ISC by incorporating into 158 FW EMS)	Entity Responsible for Implementation of Mitigation	Funding Responsibility	Completion Date
29	Update Hazardous Waste Management Plan to account for any new and/or changes waste streams generated during maintenance and operation of the F-35A.	Continue the ongoing practice of periodic review and update to the Hazardous Materials and Waste Management instructions. This will be a continuous process as construction activities near completion and industrial processes are identified, initiated, and perhaps adjusted. Perform periodic shop visits to verify compliance with Base Hazardous Materials and Waste Management Instructions.	158 FW/EM	N/A; no additional funding required	First Arrival of Aircraft